Amendments to the Specification

Please replace paragraph [0052] with the following paragraph:

[0052] For example, octapeptides (P_4-P'_4) for MMP 2 and MMP 9 have been identified (see Table 1), which octapeptides simulate the cleavage sequence of the collagen chain and are cleaved with particular efficiency by MMP 2 and 9 (in what follows, amino acids are abbreviated in accordance with the international three-letter code):

Table 1:

Peptide							
P_4	P_3	P_2	P_1	P'_1	P'_2	P'_3	P'_4
Gly	Pro	Leu	Gly	Ile	Ala	Gly	Gln **[SEQ. ID No. 1]**
Gly	Pro	Gln	Gly	Ile	Trp	Gly	Gln **[SEQ. ID No. 2]**

(Netzel-Arnett et al., *Biochemistry 32,* **1993**, 6427-6432)

[0054] Furthermore, in the case of cathepsin B, substrate-specific peptides are known with the sequence

-Gly-Phe-Leu-Gly- **SEQ. ID No. 3**

-Gly-Phe-Ala-Leu- **SEQ. ID No. 4**

-Ala-Leu-Ala-Leu- **SEQ. ID No. 5**

-Arg-Arg- or -Phe-Lys-

Werle, B., Ebert, E., Klein, W., and Spiess, E. (1995), *Biol. Chem. Hoppe-Seyler 376,* 157-164; Ulricht, B., Spiess, E., Schwartz-Albiez, R., and Ebert, W. (1995), *Biol. Chem. Hoppe-Seyler 376,* 404-414).

Please replace paragraph [0055] as follows:

[0055] The peptide sequence that contains intended peptide cleavage points relevant for the target enzyme can also be constructed such that the intended peptide cleavage point is repeated a plurality of times, for example by:

-Gly-Pro-Leu-Gly--Ile-Ala-Gly-Gln-Gly-Pro-Leu-Gly--Ile-Ala-Gly-Gln **SEQ ID No. 6**

or

-Phe-Lys-Phe-Lys-Phe-Lys-Phe-Lys-Phe-Lys-Phe-Lys- **SEQ. ID No. 7**

or a repetitive peptide sequence can be integrated that increases the distance between the thiol-binding group and the relevant intended peptide cleavage point, as for example by:

$-(Gly)_n$-Phe-Lys-Phe-Lys- **SEQ ID No. 8**

with, preferably, n = 2 to 20, more preferably $n \leq 12$.

Please replace paragraph [0084] as follows:

[0084] Here the octapeptide

Gln-Gly-Ala-Ile-Gly-Leu-Pro-Gly **SEQ. ID No. 9**

derivatized with maleinimidoglycine 1 (Mr 848, prepared by solid-phase synthesis by Bachem AG, Switzerland) was reacted with doxorubicin according to the following method:

[0087] The peptide sequence Gln-Gly-Ala-Ile-Gly-Leu-Pro-Gly **SEQ. ID No. 9** is recognized by the matrix metalloprotease MMP 9 and cleaved between isoleucine and glycine. This was shown by the following experiment: 200 µL of a 100 µM

solution of HSA-Cys^{34}-2 was incubated for 30 minutes at 37 °C with trypsine/aprotinine-activated MMP 9 (2 mU, from Calbiochem, Germany). The liberation of DOXO-Gln-Gly-Ala-Ile due to cleavage with MMP 9 was confirmed by HPLC gel chromatography (Biosil 250 SEC column from Biorad, detection at λ = 495 nm) before incubation (t = 0, compare Fig. 2A) and after an incubation time of 30 minutes with activated MMP 9 (t = 30, compare Fig. 2B).

At the Examiner's request, Applicant is supplying a clear copy of the structure at the top of page 25 (attached at end of this paper).